

REMARKS

The statement in the outstanding Office Action that claims 1-11 and 13 are allowed is appreciated.

The outstanding includes a rejection of claim 12 under 35 U.S.C. §102(b) or under 35 U.S.C. §103(a) over U.S. Patent No. 3,615,024 (*Michaels*). Claim 12 is canceled by this amendment. As a result, this prior art-based rejection has been rendered moot, and withdrawal of this rejection is requested.

The Applicants reserve the right to pursue canceled claim 12 in a continuing patent application.

The outstanding Office Action includes a rejection of claims 14-16 under 35 U.S.C. §103(a) over U.S. Patent No. 4,650,329 (*Barrett et al.*) and the disclosure on page 8 of the above-identified patent application. This rejection is traversed.

Claim 14 is directed at a method for measuring a diffusion rate of a first analyte into a first polymer. The method comprises positioning a test sample of the first polymer within a test sample region of an optical waveguide interferometer, positioning a reference sample of the first polymer within a reference sample region of the optical waveguide interferometer, passing a first beam of light through the test sample region to produce a sensing beam of light exiting the optical waveguide interferometer while simultaneously passing a second beam of light through the reference sample region to produce a reference beam of light exiting the optical waveguide interferometer, optically combining a first propagating light speed of the sensing beam of light with a second propagating light speed of the reference beam of light to create an interference pattern of alternating dark and light fringes, imaging the interference pattern through a two-dimensional array detector to produce a signal output, converting the signal output to a phase change output using a Fourier transform program, and determining the diffusion rate of the first analyte into the first polymer from the phase change.

As recognized in the outstanding Office Action, *Barrett et al.* "is silent as to determining the diffusion rate of the first analyte into the first polymer from the phase change." It is submitted that *Barrett et al.* are simply not concerned with determining diffusion rate of a first

analyte into a first polymer. *Barrett et al.* disclose an optical detection device for chemical agents. See *Barrett et al.* at column 1, lines 6-10. The "objects of the invention" described by *Barrett et al.* include discriminating between chemical agents, increasing the sensitivity of optical agent detection devices, discriminating between chemical agents by means of two-dimensional and three-dimensional signatures of those chemical agents, discriminating between chemical agents by means of a two-photon coherent state correlation function having very high signal-to-noise ratio with squeeze states, and eliminating electronic interference problems in the discrimination between chemical agents. See *Barrett et al.* at column 1, lines 20-43.

In addition to failing to describe the determination of the diffusion rate of a first analyte into a first polymer from a phase change, *Barrett et al.* are simply not interested in determining diffusion rate of a first analyte into a first polymer from the phase change. Furthermore, the outstanding Office Action fails to explain why one having ordinary skill in the art would modify the teachings of *Barrett et al.* to determine the diffusion rate of a first analyte into a first polymer from the phase change.

The outstanding Office Action points to the applicants' disclosure at page 8 for identifying an equation. Other than the existence of the equation on page 8 of the specification, the outstanding Office Action fails to sufficiently explain why one having ordinary skill in the art would have modified *Barrett et al.* to include a step of "determining the diffusion rate of the first analyte into the first polymer from the phase change" according to the present invention. This is a step that is not of interest to *Barrett et al.*, and is a step that deviates from the "objects of the invention" described by *Barrett et al.*

In view of the above comments, one having ordinary skill in the art would not have received the suggestion to modify *Barrett et al.* to achieve the presently claimed invention. Accordingly, the claimed invention would not have been obvious from *Barrett et al.* and the equation on page 8 of the specification. Accordingly, withdrawal of the rejection is requested.

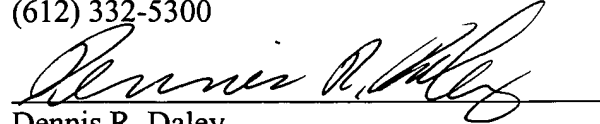
It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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